

**LCGCC Recommendations submitted by Dee Eggers (Microalgae for Fuel) -
February 5, 2010**

**A BILL TO BE ENTITLED
AN ACT TO APPROPRIATE FUNDS FOR RESEARCH AND DEVELOPMENT OF
MICROALGAE FOR FUEL**

Whereas, there is a scientific consensus, as established by the Intergovernmental Panel on Climate Change and confirmed by the National Academy of Sciences, that the continued buildup of heat-trapping gases in the atmosphere threatens the stability of the global climate; and

Whereas, more effective and responsive management of greenhouse gas emissions and sequestration are necessary to protect the public health and safety, long term economic well-being, and environment of the State; and

Whereas, the interests of the State are inextricably connected to the proper management of greenhouse gas emissions and sequestration; and

Whereas, North Carolina purchases from out-of-State over twelve billion dollars (\$12,000,000,000) annually in fuel resources; and

Whereas, the North Carolina economy would benefit from development of in-State energy resources; and

Whereas, emissions from non-fossil fuel carbon contribute far less to the buildup of greenhouse gases in the atmosphere than emissions from fossil fuels; and

Whereas, the production of biofuels using microalgae will reduce North Carolina's dependence on out-of-State and foreign energy imports to meet its growing energy needs, thus keeping money and jobs within the State; and

Whereas, research conducted by the National Renewable Energy Laboratory indicate microalgae provide 10 – 1000 times more oil per acre per year than any other known oil crop; and

Whereas, after oil extraction, microalgae retains value for use as livestock feed, soil amendment, or as a feedstock for methane generation; and

Whereas, microalgae can be used for bacterial decomposition of organic wastes and nutrient reduction in water or waste lagoons; and

Whereas, microalgae can be used to capture CO₂ emissions from fuel combustion; and

Whereas, the emerging microalgae industry can provide jobs and fuel for North Carolina; Now, therefore,

The General Assembly of North Carolina enacts:

SECTION 1. There is appropriated from the General Fund to the Department of Agriculture the sum of five hundred thousand dollars (\$500,000) for the 2007-2008 fiscal year and the sum of five hundred thousand dollars (\$500,000) for the 2008-2009 fiscal year to be appropriated to and distributed by the Department of Agriculture as grants of twenty thousand dollars (\$20,000) to two hundred thousand dollars (\$200,000) to develop microalgae and its applied technologies in North Carolina, specifically:

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- (1) Identifying and developing fresh and/or saltwater strains of algae which produce large amounts of lipids, have short-life cycles, and may be grown under conditions found in the State.
- (2) Developing closed-system bioreactors that maximize production, allow greater control of environmental factors, and minimize chance of contamination from foreign algae and bacteria.
- (3) Developing microalgae systems that utilize agricultural and industrial wastes.
- (4) Developing uses for residue, once lipids have been extracted.
- (5) Evaluate potential ecological impacts of large-scale microalgae production.

SECTION 2. This act becomes effective XX.